

## Remarks

Claims 1-4, 6-10, 13-14 and 17-20 are pending.

All previous claims stand rejected as obvious over Beltrame et al. Applicant respectfully traverses this rejection, and requests reconsideration on the grounds set forth below.

First, as amended, claim 1 recites that “the electric motor, while in operation, exerts torque that fully and automatically drives the wheel ...,” i.e., the electric motor drives the wheel without any application by a human of an assisting force to the wheel.<sup>1</sup> By contrast, Beltrame teaches a drive assistance device for a golf buggy, i.e., a device that requires application of human force in order to move the vehicle. See Beltrame, at col. 1, line 67 – col. 2, line 4 (“Thus, when a golfer initiates movement of the golf buggy in a forward or reverse direction, the attraction and repulsion of the magnets with respect to the electro-magnetic field coil has the combined effect of assisting the drive of the wheel ...”) (Emphasis added). It is respectfully submitted that Beltrame actually teaches away from a traction assembly that “fully and automatically” drives the wheel, as set forth in amended claim 1.

Second, independent claim 1 recites, *inter alia*, that “the traction assembly has a traction ratio, defined as the arm of the torque divided by the first radius, which is larger than 0.57.” The Examiner has acknowledged that this aspect of the claims is not present

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<sup>1</sup> Support for this amendment can be found at, for example at p. 14, lines 28-30 (“... the wheel strut and wheel according to the invention are particularly suitable for use in fully automatically guided vehicles.”) See also, Specification at p. 14, lines 23-25 (“[i]t is also possible for instance that a fork-lift truck is equipped with only one or two wheels according to the present invention ...”) and p. 18, lines 3-5 (“The tyre may also be designed ... for use in medium speed vehicles such as ... city taxis ...”) It is well known that fork-lift trucks and city taxis operate without any application by a human of an assisting force to the wheels of the vehicle.

in Beltrame. Nonetheless, the Examiner maintains that it would have been obvious to provide a traction ratio that is larger than 0.57 “since it has been held that discovering an optimum value of an effective variable involves only routine skill in the art.” Applicant respectfully disagrees. Section 2144.05(II)(B) of the Manual of Patent Examining Procedure (MPEP) governs this issue and provides as follows:

**"B. Only Result-Effective Variables Can Be Optimized**

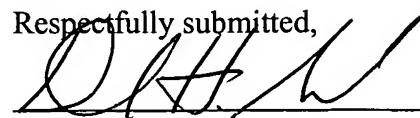
A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977) (The claimed wastewater treatment device had a tank volume to contractor area of 0.12 gal./sq. ft. The prior art did not recognize that treatment capacity is a function of the tank volume to contractor ratio, and therefore the parameter optimized was not recognized in the art to be a result- effective variable.). . . . “(Emphasis added)

In the present case, the Examiner has failed to show that Applicant’s claimed traction ratio (i.e., (defined as a ratio of the arm of the torque divided by a radius that extends to the exterior surface of the wheel)) was recognized in the prior art as a result-effective variable. In the decision cited in the MPEP (i.e., *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977)), the Court reversed the Examiner’s obviousness rejection on the ground that the claims were directed a parameter that had not previously been recognized as a result-effective variable. Like the claims at issue in *In re Antonie*, Applicant’s claims are directed to a parameter (i.e., Applicant’s claimed traction ratio) that has not previously been recognized as a result-effective variable. For this reason, the Examiner’s rejection of the present claims cannot be maintained.

In view of the above, it is submitted that all pending claims are in condition for allowance. A Notice of Allowance is earnestly solicited.

The Commissioner is hereby authorized to charge any deficiency in the fees due in connection with this filing Deposit Account 50-0310. A duplicate of this authorization is enclosed.

Respectfully submitted,



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